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Title: Serrobiochemical Effects of Potassium Bromate on Wistar Albino Rats

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Abstract: The present study aimed to clarify the toxic effect of potassium bromate in Wistar albino rats. Thirty rats were divided into 5 groups. The first group severed as control and the other four groups received potassium bromate orally at doses 50, 100, 200 and 400 mg kg⁻¹ body weight (b.wt.) for 21 days. Rats received 400 mg kg⁻¹ b.wt. died within 3 days and those received 200 mg kg⁻¹ b.wt. died on the 18th day post treatment. The body weights of rats treated with potassium bromate were not affected but the relative weights of the kidney and liver were significantly increased (p<0.05) in the group of rats received 100 mg kg⁻¹ b.wt. potassium bromate compared to the control group. Clinically difficulty in breathing and depression occurred in those rats received 100 and 200 mg kg⁻¹ b.wt. of potassium bromate. A significant (p<0.05) increase of urea, creatinine and potassium beside a decrease in Na level was evident in the groups received 100 and 200 mg kg⁻¹ b.wt. of potassium bromate. Histopathological examination of the groups of rats received 100, 200 and 400 mg kg⁻¹ b.wt. showed generalized congestion, haemorrhage and degenerative changes in the kidney and liver. Also increased intestinal goblet cells, stomach epithelium desquamation, pneumonia, haemorrhage, neuronal degeneration and vaculation of the brain were evident. The group of rats received 50 mg kg⁻¹ b.wt. of potassium bromate was not affected compared to the control.

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